

U.S. FISH AND WILDLIFE SERVICE
SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: *Cynomys ludovicianus*

COMMON NAME: Black-tailed prairie dog

LEAD REGION: Region 6

INFORMATION CURRENT AS OF: July 7, 2004

STATUS/ACTION:

- ☐ Initial 12-month Petition Finding: ☐ not warranted
☐ warranted
☐ warranted but precluded
- ☐ Species assessment - determined species did not meet the definition of endangered or threatened under the Act and, therefore, was not elevated to Candidate status
- ☐ New candidate
- ☐ Continuing candidate
- ☐ Non-petitioned
- ☒ **X** Petitioned - Date petition received: **July 31, 1998; August 26, 1998**
- ☒ **X** 90-day positive - FR date: **March 25, 1999**
- ☒ **X** 12-month warranted but precluded - FR date: **February 4, 2000**
- ☐ Is the petition requesting a reclassification of a listed species?
- ☐ Listing priority change
- Former LP:
- New LP:
- Latest Date species became a candidate: **February 4, 2000**
- ☒ **X** Candidate removal: Former LP: **8** (Check only one reason)
- ☒ **X** A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.
- ☐ F - Range is no longer a United States territory
- ☐ M - Taxon mistakenly included in past notice of review.
- ☐ N - Taxon may not meet the Endangered Species Act's definition of "species."
- ☐ X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Mammal, *Sciuridae*

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming (United States); Canada; and Mexico

CURRENT STATES/COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE:

Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming (United States); Canada; and Mexico

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INTRODUCTION: On July 31, 1998, the U.S. Fish and Wildlife Service (FWS) received a petition dated July 30, 1998, from the National Wildlife Federation (NWF) (1998). The petitioner requested that the FWS list the black-tailed prairie dog (*Cynomys ludovicianus*) as threatened throughout its range. On August 26, 1998, the FWS received another petition regarding the black-tailed prairie dog from the Biodiversity Legal Foundation, the Predator Project, and Jon C. Sharps (Biodiversity Legal Foundation et al. 1998). The FWS accepted this second petition as supplemental information to the NWF petition. A notice of a 90-day finding for the petition was published in the Federal Register on March 25, 1999 (64 FR 14425), indicating that it and other readily available scientific and commercial information presented substantial information that the petitioned action may be warranted. On February 4, 2000, the FWS announced a 12-month finding that issuing a proposed rule to list the black-tailed prairie dog as a threatened species was warranted but precluded by other higher priority actions (65 FR 5476). When we find that a petition to list a species is warranted but precluded, we refer to the species as being a candidate for listing.

Section 4(b)(3)(B) of the Endangered Species Act (ESA) directs that, when we make a “warranted but precluded” finding on a petition, we are to treat the petition as being one that is resubmitted annually on the date of the finding; thus the ESA requires us to reassess the petitioned actions and to publish a finding on the resubmitted petition on an annual basis. Two previous candidate assessments and resubmitted petition findings for this species were completed February 7, 2001, (66 FR 54808, October 30, 2001) and March 18, 2002 (67 FR 40657, June 13, 2002) (2001 Candidate Assessment, and 2002 Candidate Assessment respectively). These assessments are available at <http://mountain-prairie.fws.gov/btprairiedog/>. In our most recent Notice of Findings on Resubmitted Petitions, we noted that we had not yet updated our 2002 finding with regard to the black-tailed prairie dog (69 FR 24876, May 4, 2004). We noted that, since our 2002 assessment, we had received significant new information about this species from the NWF, Forest Guardians, and the States of Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. We stated that we were considering this new information and intended to publish a finding for this species upon completing our new assessment. This revised candidate assessment, which is the foundation for our finding on the resubmitted petition, includes all new information that we have received since 2002. It presents evaluations of this new information and re-evaluations of previously acquired information. In accordance with section 4(b)(3)(B) of the ESA, we have now completed a status review of the best available scientific and commercial information on the species, and have reached a determination regarding the petitioned action.

Section 4(a)(1) of the ESA directs the FWS to determine whether any species is an endangered or threatened species because of any of five factors that collectively address all natural and manmade influences. These determinations are guided by whether effects related to various factors rise to the level of threats that are substantial enough to cause the status of a species to meet the definitions of “threatened” or “endangered,” as given in section 3 of the ESA. The term “threatened species” means “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The term “endangered species” means “any species which is in danger of extinction throughout all or a significant portion of its range...” Analyses of the distribution, abundance, and trends of a species’ populations are useful in evaluating whether a species meets either of these definitions.

In our prior determinations, we concluded that the impacts of disease and some other lesser factors were substantial enough to warrant the proposal of a rule to list the black-tailed prairie dog as a threatened species. The status of the black-tailed prairie dog is re-evaluated below with an analysis of the threats it faces, placed within a frame of reference of relevant biological information, including the distribution, abundance, and trends described in this assessment.

BIOLOGICAL INFORMATION: Prairie dogs occur only in North America. They are rodents within the squirrel family (*Sciuridae*) and include five species – the black-tailed prairie dog; the white-tailed prairie dog (*C. leucurus*); the Gunnison’s prairie dog (*C. gunnisoni*); the Utah prairie dog (*C. parvidens*); and the Mexican prairie dog (*C. mexicanus*) (Pizzimenti 1975). The Utah and Mexican prairie dogs are currently listed as threatened (49 FR 22339, May 29, 1984) and endangered (35 FR 8495, June 2, 1970), respectively. Generally, the black-tailed prairie dog occurs east of the other four species in more mesic habitat. Based upon the information currently available, the FWS concurs with Pizzimenti’s (1975) assessment of the black-tailed prairie dog as monotypic.

Prairie dogs are small, stout ground squirrels. The total length of an adult black-tailed prairie dog is approximately 14 to 17 inches and the weight of an individual ranges from 1 to 3 pounds. Individual appearances within the species vary in mixed colors of brown, black, gray, and white. The black-tipped tail is characteristic (Hoogland 1995). Black-tailed prairie dogs are diurnal, burrowing animals. They do not hibernate as do white-tailed, Gunnison’s, and Utah prairie dogs (Hoogland 1995, Tileston and Lechleitner 1966). The black-footed ferret (*Mustela nigripes*), swift fox (*Vulpes velox*), mountain plover (*Charadrius montanus*), ferruginous hawk (*Buteo regalis*), burrowing owl (*Athene cunicularia*), and numerous other species are dependent upon prairie dogs to varying degrees.

Several biological factors determine the reproductive potential of the species. Females may breed in their first year, but usually do not breed until their second year, live 3 to 4 years, and produce a single litter, usually four to five pups, annually (Hoogland 1995, Hoogland 2001, King 1955, Knowles and Knowles 1994). Therefore, 1 female may produce 0 to 20 young in its lifetime. While the species is not prolific in comparison to many other rodents, the species is capable of rapid population increases subsequent to substantial reductions (Seery, U.S. Forest Service (USFS), in litt. 2001).

Historically, black-tailed prairie dogs generally occurred in large colonies that contained thousands of individuals, covered hundreds or thousands of acres, and extended for miles (Bailey 1905). At present, most colonies are much smaller. Colonial behavior offers an effective defense mechanism by aiding in the detection of predators and by deterring predators through mobbing behavior. It increases reproductive success through cooperative rearing of juveniles and aids parasite removal via shared grooming. Colonial behavior also can play an important role in the transmission of disease (Antolin et al. 2002; Biggins and Kosoy 2001; Hoogland 1995; Olsen 1981). The role of colonial behavior in the transmission of disease is discussed in more detail below (see Factor C).

Black-tailed prairie dog colonies can combine to form a complex, or metapopulation, with interchange occurring between colonies. Typical dispersal is usually between established colonies and limited to approximately 3 miles or less (Garrett and Franklin 1988, Hoogland 1995); although Knowles (1985) noted occasional long-distance dispersal distances as high as 6 miles. Black-tailed prairie dog complexes or metapopulations expand or contract depending upon various intrinsic factors (e.g., reproductive capabilities) and extrinsic factors (e.g., chemical control). In order to substantially augment or replace populations, several individuals must migrate between colonies. However, only a very few individuals are required for useful genetic exchange.

Distribution, Abundance, and Trends

The historic range of the black-tailed prairie dog included portions of 11 States, Canada, and Mexico. The species is currently present in 10 States – Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. Black-tailed prairie dogs occur from extreme south-central Canada to northeastern Mexico and from approximately the 98th meridian west to the Rocky Mountains. It has been extirpated from Arizona. Range contractions have occurred in the southwestern portion of the species' range in Arizona, western New Mexico, and western Texas through conversion of grasslands to desert shrub lands (Pidgeon et al. 2001). Range contractions are largely due to habitat destruction through cropland development in the eastern portion of the species' range in Kansas, Nebraska, Oklahoma, South Dakota, and Texas (Black-footed Ferret Recovery Foundation, in litt. 1999a).

Populations in Canada represent approximately 0.1 percent of the current North American populations. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has considered the black-tailed prairie dog vulnerable since 1978 due to its restricted distribution. This status was reconfirmed in 1998 (COSEWIC 1998). Populations in Mexico represent approximately 2.7 percent of the current North American populations. These populations have been reduced, largely due to control efforts and agricultural conversion (Ceballos et al. 1993). The species is considered threatened in Mexico (Secretaria del Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP) (Environment, Natural Resources and Fishing Secretary) 1994).

Most estimates of prairie dog populations are not based on numbers of individual animals, but on estimates of the amount of occupied habitat. The actual number of animals present depends upon the prevailing density of animals in that locality. Estimates of black-tailed prairie dog density vary depending upon the season, region, and climatic conditions; but typically range from 2 to 18 individuals per acre (Fagerstone and Ramey 1996, Hoogland 1995, King 1955, Koford 1958, Miller et al. 1996). Density also can vary temporally, due to chemical control and plague, as discussed in later sections. Most prairie dog surveys do not estimate density because of the associated effort and cost. The FWS believes that estimates of black-tailed prairie dog occupied habitat provide the best available and most reasonable means of gauging populations and the status of the species across the extensive range of the species.

Since the publication of our 12-month finding in 2000, all States within the current range of the species, with the exception of Montana, have completed Statewide surveys based on occupied habitat. These efforts were systematically designed and implemented, although methodologies varied between States. We believe that the current Statewide estimates are likely more accurate than those provided in the 2000 12-month finding, which were largely based on earlier data, extrapolation of partial surveys, telephone surveys, and desktop exercises. Collectively, the recent estimates represent the first broad benchmark of evaluating black-tailed prairie dog populations since the early 1960s.

In 1961, the Bureau of Sport Fisheries and Wildlife (BSFW) compiled information based on queries of field agents familiar with long-term poisoning efforts on a county-by-county basis (BSFW 1961). As noted in the 2000 12-month finding, the BSFW dataset represents an effort by a single agency, with a similar methodology, at a single point in time, across the entire range of the species in the United States. This dataset is useful as it represents the best available information for that time period.

Table 1a provides State-by-State (and country-by-country) estimates of occupied black-tailed prairie dog habitat. Historic Statewide estimates of black-tailed prairie dog occupied habitat provided in Table 1a were typically obtained some years after land conversion, grazing, and/or chemical control had been initiated. In many cases they were derived by necessity via extrapolation by observers familiar with early control efforts and the general reduction of the species' historic populations. Statewide estimates for the 12-month finding we published in 2000 were frequently extrapolated from earlier or more localized estimates. More recent current estimates were derived directly from aerial surveys, field surveys and/or interpretations of recent remotely sensed data. Consequently, the accuracy and reliability of the data has likely improved for current estimates since the 2000 12-month finding. In addition, widespread drought may have encouraged some expansion at some sites throughout the species' range (Thompson, USFS, in litt. 2002).

Table 1b presents site-specific estimates of occupied habitat for various locations where data have been collected over a shorter timeframe (10 to 35 years). Much of the variability illustrated in Table 1b is due to plague events. We consider the data presented in Table 1b for a given location to be accurate due to consistent methodologies (particularly in recent years), small survey areas, and thorough ground-truthing. The State, tribal, and country discussions that

follow Table 1a and 1b provide a more in-depth analysis of black-tailed prairie dog populations detailing, both large-scale and site-specific estimates of occupied habitat, which are our best indicators of population size.

Table 1a. Summary of Statewide Estimates of Black-tailed Prairie Dog Occupied Habitat (estimates in thousands of acres)

State ^a or Country	Historic	BSFW 1961 ^b	Other Recent	States 1998	FWS 2000	States 2000	States 2001	States 2002 to 2003
Arizona	650 (Van Pelt in litt. 1998)	0 ^c	0	0	0	0	0	0
Colorado	3,000 (Clark 1989) 7,000 (Knowles 1998)	96 ^c	89 in 1979 (Van Pelt 1999)	973 in 1990 (CO Dept AG in litt. 1998)	93	214 (CDOW in litt. 2000)	300-500 (CDOW in litt. 2001)	631 (CDOW in litt. 2003) ^c
Kansas	2,000 (Lantz 1903) 2,500 (Knowles 1998)	50 ^c	57 (Smith 1958) ^c 36 (Henderson & Little 1973) ^c 47 (Vanderhoof & Robel 1992) ^c		42		125 (KDWP in litt. 2001) ^c	130 (Luce in litt. 2003) ^c
Montana	1,471 (Flath & Clark 1986) 6,000 (Knowles 1998)	28 ^c	125 (Flath & Clark 1986) ^c >100 (Campbell 1989) ^c	66 (MDFWP in litt. 1998) ^c	65	80-90 (MDFWP in litt. 2000) ^c	90 (MDFWP in litt. 2001) ^c	90 (MDFWP in litt. 2003) ^c
Nebraska	6,000 (Knowles 1998)	30 ^c	15 in 1971 (Lock 1973) 81 in 1999 (Sidle et al. 2001) ^c	60-80 (NGPC in litt. 1998)	60	80 (Luce pers. comm. 2000)	27-70 (NGPC in litt. 2001) ^c	137 (Fritz pers. comm. 2004) ^c
New Mexico	>6,640 (Bailey 1932)	17 ^c	137 (Bodenchuck 1981)		39	<50 (NMDGF in litt. 2000)	< 50 (NMDGF in litt. 2001)	60 (NMDGF in litt. 2003) ^c
North Dakota	2,000 (Knowles 1998)	20 ^c	>7 (Grondahl 1973) 10 (Stockrahm 1979) 35 in 1999 (Sidle et al. 2001) ^c	30 (NDGFD in litt. 1999)	25	30 (NDGFD in litt. 2000)	33 (NDGFD in litt. 2001)	20 (NDGFD in litt. 2003) ^c

State ^a or Country	Historic	BSFW 1961 ^b	Other Recent	States 1998	FWS 2000	States 2000	States 2001	States 2002 to 2003
Oklahoma	950 (Knowles 1998)	15 ^c	10 (Tyler 1968) ^c 15 (Lewis & Hassien 1973) ^c 18 (Shackford et al. 1990) ^c 8 in 1999 (Lomolino & Smith 2001) ^c	18 (ODWC in litt. 1999)	9		19 (ODWC in litt. 2001)	64 (Hoagland pers. comm. 2003) ^c
South Dakota	1,757 (Linder et al. 1972)	33 ^c	37 in 1967 (Henderson et al 1974) ^c 60 in 1968 (Rose 1973) 700 in 1980 (Tschetter 1988) 184 in 1987 (Tschetter 1988) 142 in 1999 (Sidle et al. 2001) ^c	231 in 1996 (SDDGFP in litt. 1998) ^c	147	>150 (SDDGFP in litt. 2000)	142 (SDDGFP in litt. 2001)	407 (SDDA & SDDGFP 2004) ^c
Texas	58,000 (Bailey 1905)	26 ^c	>13 (Cottam & Caroline 1965) 90 (Cheatheat 1977) ^c >68 (Lair & Mecham 1991) ^c		71	86 (TPWD in litt. 2000)	150-200 (TPWD in litt. 2001)	>178 (TPWD in litt. 2003) ^c
Wyoming	16,000 (Knowles 1998)	49 ^c	133 in 1971 (Clark 1973) 329 in 1999 (Sidle et al. 2001) ^c	131-204 in 1987 (WGFD in litt. 1999) ^c 362 (WY Dept AG in litt. 1999)	125	300 (WGFD in litt. 2000)	<300 (WGFD in litt. 2001)	125 (Luce in litt. 2003) ^c
U.S Total	111,000 (Knowles 1998)	364 ^c			676		1,236-1,529 ^d	1,842

State ^a or Country	Historic	BSFW 1961 ^b	Other Recent	States 1998	FWS 2000	States 2000	States 2001	States 2002 to 2003
Canada	1.5-2 (Knowles 1998)		1.9 (Millson 1976) ^c 1.6 (Laing 1986) ^c 2.3 (Fargey pers. comm. 1998) ^c		2		2.6 (Fargey in litt.)	2.6 (Fargey in litt 2001) ^c
Mexico	1,384 (Ceballos et al. 1993)		136 (Ceballos et al. 1993) ^c		90		>49 (List in litt. 2001)	>49 (List in litt 2001) ^c
North America	104,000 (Anderson et al 1986) ^e 99,000-247,000 (Miller et al. 1996) ^e 384,000 historic range (Seton 1953)				768		1,288-1,581 ^d	1,894
^a Includes Tribal lands within State boundaries. ^b Bureau of Sport Fisheries and Wildlife (BSFW) (1961). ^c Estimates that appeared to be derived from aerial surveys, ground mapping, and other field work. ^d We used the range of values as reported for three States and 50 for New Mexico, 300 for Wyoming, 49 for Mexico. Estimates were rounded where appropriate. ^e Includes all prairie dog species present.								

Table 1b. Summary of Site-Specific Estimates of Black-tailed Prairie Dog Occupied Habitat (estimates in acres)

Site	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
Rocky Mt. Arsenal, Colorado	4,574 in 1988 (Seery in litt. 2001)	247 in 1989 (Seery in litt. 2001)	2,429 in 1994 (Seery in litt. 2001)	22 in 1995 (Seery in litt. 2001)	1,646 in 2000 (Seery in litt. 2001)	314 in 2002 (Seery in litt. 2002)
Comanche NG, Colorado	1,804 in 1980 (Thompson in litt. 2002)	1,374 in 1998 (Sidle in litt. 1999)	1,974 in 1999 (Thompson in litt. 2002)	4,342 in 2001 (Cully & Johnson 2002)	5,886 in 2002 (Cully & Johnson 2002)	
Pawnee NG, Colorado	445 in 1980 (Thompson in litt. 2002)	731 in 1998 (Sidle in litt. 1999)	744 in 1999 (Thompson in litt. 2002)	983 in 2000 (Thompson in litt. 2002)	1,090 in 2001 (Cully & Johnson 2002)	1,800 in 2002 (Cully & Johnson 2002)
Cimarron NG, Kansas	49 in 1980 (Thompson in litt. 2002)	1,716 in 1988 (Sidle pers. comm. 1998)	1,287 in 1998 (Sidle in litt. 1999)	1,688 in 1999 (Thompson in litt. 2002)	2,639 in 2001 (Thompson in litt. 2002)	3,321 in 2002 (Cully & Johnson 2002)
Ft. Belknap Reservation, Montana	24,000 in 1990 (MDFWP in litt. 1998)	11,000 in 1996 (MDFWP in litt. 1998)	13,475 in 1998 (MDFWP in litt. 1998)	14,230 in 1999 (Vosburgh in litt. 2002)	12,987 in 2000 (Vosburgh in litt. 2002)	12,989 in 2002 (Vosburgh in litt. 2002)
N. Cheyenne Reservation, Montana	10,750 in 1990 (Fourstar pers. comm. 1998)	378 in 1995 (Fourstar pers. comm. 1998)	994 in 1997 (Fourstar pers. comm. 1998)	1,519 in 1998 (Fourstar pers. comm. 1998)	3,300 in 2001 (Vosburgh in litt. 2003)	3,913 in 2003 (Vosburgh in litt. 2003)
Oglala NG, Nebraska	297 in 1980 (Thompson in litt. 2002)	741 in 1998 (Sidle in litt. 1999)	895 in 1999 (Thompson in litt. 2002)	810 in 2000 (Thompson in litt. 2002)	865 in 2001 (Thompson in litt. 2002)	1,275 in 2002 (Thompson in litt. 2002)
Kiowa/Rita Blanca NG, New Mexico, Oklahoma, Texas	1,038 in 1980 (Thompson in litt. 2002)	1,478 in 1999 (Thompson in litt. 2002)	3,931 in 2001 (Thompson in litt. 2002)	5,399 in 2002 (Thompson in litt. 2002)	6,771 in 2003 (Garcia in litt. 2004)	4,114 in 2004 (Garcia in litt. 2004)
Cimarron County, Oklahoma	1,837 in 1967 (Tyler 1968)	5,500 in 1972 (Lewis & Hassien 1973)	10,406 in 1989 (Shackford 1990)	2,370 in 1991 (Shaw 1993)	1,975 in 1999 (Lomolino in litt 1999)	13,523 in 2002 (Luce 2002)
Buffalo Gap NG, South Dakota	42,600 in 1980 (Thompson in litt. 2002)	13,270 in 1998 (Sidle in litt. 1999)	18,105 in 2002 (Thompson in litt. 2002)			
Fort Pierre NG, South Dakota	939 in 1980 (Thompson in litt. 2002)	719 in 1998 (Sidle in litt. 1999)	625 in 1999 (Thompson in litt. 2002)	642 in 2002 (Thompson in litt. 2002)		
Grand River NG, South Dakota	1,507 in 1980 (Thompson in litt. 2002)	1,589 in 1998 (Sidle in litt. 1999)	2,204 in 2000 (Thompson in litt. 2002)	1,787 in 2002 (Thompson in litt. 2002)		
Thunder Basin NG, Wyoming	6,301 in 1980 (Thompson in litt. 2002)	18,340 in 1997 (Thompson in litt. 2002)	18,239 in 1998 (Sidle in litt. 1999)	15,864 in 2001 (Thompson in litt. 2002)	9,000 in 2003 (Byer, pers. comm.)	

ARIZONA - The black-tailed prairie dog has been extirpated from Arizona. No additional information regarding distribution, abundance, and trends of the species in Arizona has been obtained since publication of our 12-month finding in 2000.

COLORADO - The Colorado Division of Wildlife (CDOW) reported a Statewide estimate of 631,000 acres of black-tailed prairie dog occupied habitat based on an aerial inventory (Pusateri, CDOW, in litt. 2002; Russell, CDOW, in litt. 2003). Thirty-eight complexes were identified Statewide. The methodology employed by CDOW is comprehensive and based on an aerial transect method developed by Sidle et al. (2001) and modified by White (CDOW 2003). The FWS estimate (based upon a sum of site-specific estimates and extrapolations) in the 2000 12-month finding was 93,000 acres of occupied habitat. The 1961 BSFW estimate was about 96,000 acres. A mail survey estimate reported by Colorado Department of Agriculture (1990) was about 973,000 acres of occupied habitat.

Rosmarino (Forest Guardians et al., in litt. 2003b) disagreed with the Statewide estimate, suggesting that until vigorous ground-truthing is completed, estimates of occupied habitat for Colorado and other States must not be presumed accurate. The NWF also has expressed concerns regarding the CDOW estimate (Miller, NWF, in litt. 2004). Miller (2004) compared estimates of occupied habitat on National Grasslands (NG) from CDOW and USFS. Miller (2004) noted that at Comanche NG, USFS estimates were 58 percent of CDOW estimates and at Pawnee NG, USFS estimates were 68 percent of CDOW estimates. If the Statewide numbers are actually 58 or 68 percent of the estimate, this is still substantially higher than most previous Statewide estimates. Discrepancies may be related to protocol violations or limitations in the ability to differentiate between active and inactive colonies. Limited ground-truthing of 2002 CDOW estimate was recently undertaken by the NWF (Miller, NWF, in litt. 2004), but due to limitations in the study design, a correction factor will not be presented. Despite known or suspected limitations, this inventory represents the best scientific and commercial data available. The CDOW aerial survey is thought to be the most comprehensive inventory ever undertaken in Colorado. A manuscript describing the CDOW study methodology has been peer reviewed and recommended for publication in the Wildlife Society Bulletin (Remington, CDOW, in litt. 2004).

The CDOW (2003) identifies 18 extant complexes greater than 5,000 acres. More than 10 percent of the total occupied acreage in Colorado occurs in complexes greater than 1,000 acres. The most recent inventory indicates that the black-tailed prairie dog remains widely distributed in Colorado with 100 percent of the counties within the historic range still containing prairie dogs (CDOW 2003).

Trend information at some Colorado sites indicates declines due to plague with at least partial recovery in subsequent years. At the Rocky Mountain Arsenal, plague has resulted in a substantial overall decline in occupied habitat from 1,646 acres in 2000 to 314 acres in 2002 (Seery, FWS, in litt. 2002). However, at Comanche NG, occupied habitat appears to have returned to pre-plague levels following epizootics. Cully and Johnson (2002) estimated 5,886 acres of occupied habitat at Comanche NG, a 36 percent increase from 2001. Occupied habitat at Pawnee NG in 2002 was reported at about 1,800 acres, a 65 percent increase from 2001 (Cully and Johnson 2002). Hoefert (U.S. Army, in litt. 2002) reported 3,500 acres of occupied habitat at Fort Carson, a 109 percent increase from 2001. Estimates for Pueblo and

Pinon Canyon in 2002 were similar to those in 2001 with 2,632 acres at Pueblo Army Depot and 353 acres at Pinon Canyon Maneuver Site. Long-term trends are provided for Rocky Mountain Arsenal, Comanche NG, and Pawnee NG in Table 1b.

KANSAS – Based on recent aerial surveys, Kansas Department of Wildlife and Parks (KDWP) estimated there are about 130,000 acres of black-tailed prairie dog occupied habitat in Kansas (Mitchener, KDWP, in litt. 2003). The FWS estimate (based upon a mean of previous estimates) in the 2000 12-month finding was 42,000 acres. The 1961 BSFW estimate was about 50,000 acres.

There are no extant complexes greater than 5,000 acres in Kansas. One complex is greater than 1,000 acres. Less than 10 percent of the total occupied acreage in Kansas occurs in complexes greater than 1,000 acres. The black-tailed prairie dog appears to be largely absent from eastern portions of its historic range in Kansas. Nevertheless, more than 75 percent of the counties within the historic range of the species contain prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c).

For specific sites, Cully and Johnson (2002) estimated 3,321 acres at Cimarron NG. This was an increase of 26 percent from 2001. Table 1b presents long-term trends for this site.

MONTANA - The Montana Department of Fish, Wildlife and Parks (MDFWP) provided a Statewide estimate (including Tribal lands) of 90,000 acres of black-tailed prairie dog occupied habitat in 2002 (Hagener, MDFWP, in litt. 2002). This estimate is the same as that in the 2002 candidate assessment. The FWS estimate (based upon Knowles 1998) in the 2000 12-month finding was 65,000 acres. The 1961 BSFW estimate was about 28,000 acres. In 2003, Hagener (MDFWP, in litt. 2003) noted that most areas in Montana show expansion of black-tailed prairie dog occupied habitat.

There are three extant complexes greater than 5,000 acres. More than 10 percent of the total acreage in Montana occurs in complexes greater than 1,000 acres. Black-tailed prairie dog populations appear to be widely distributed in Montana with 90 percent of the historic range occupied by the species (Montana Prairie Dog Working Group 2001).

For specific sites, Vosburgh (Intertribal Consortium, in litt. 2003) estimated about 7,000 acres of black-tailed prairie dog occupied habitat at Crow Reservation in Montana. Approximately 80 percent of Reservation lands have been mapped, so the actual amount of occupied habitat may be larger. Vosburgh (Intertribal Consortium, in litt. 2002) and Hagener (MDFWP, in litt. 2002) both noted a 3,000 to 4,000 acre reduction in occupied habitat on Crow Reservation lands during 2002 due to plague. Both sources also estimated nearly 13,000 acres of occupied habitat at Fort Belknap Reservation, a decrease of about 1,200 acres from the 1999 estimate due to plague. Additionally, Vosburgh (Intertribal Consortium, in litt. 2003) estimated 3,913 acres of occupied habitat at the Northern Cheyenne Reservation, an increase of about 600 acres from the previous estimate in 2002. Hagener (MDFWP, in litt. 2003) estimated 6,300 acres on Charles M. Russell National Wildlife Refuge in 2002. Trend information over the last 10 to 20 years at most

large sites in the State continues to indicate declines due to plague, with partial recovery in subsequent years, but without complete recovery to pre-plague levels. Table 1b presents long-term trends for Fort Belknap Reservation and Northern Cheyenne Reservation.

NEBRASKA - Statewide, the Nebraska Game and Parks Commission (NGPC) estimated 137,000 acres of black-tailed prairie dog occupied habitat in 2003 (Fritz, NGPC, pers. comm. 2004). This estimate is derived from aerial surveys employing the same methodology used by CDOW. The FWS estimate (based upon Amack, NGPC, in litt. 1998 and Knowles 1998) in the 2000 12-month finding was 60,000 acres of occupied habitat. The 1961 BSFW estimate was about 30,000 acres.

There are no extant complexes greater than 5,000 acres in Nebraska. One complex is greater than 1,000 acres. Less than 10 percent of the total occupied acreage in Nebraska occurs in complexes greater than 1,000 acres. The black-tailed prairie dog appears to be largely absent from eastern portions of its historic range in Nebraska. Nevertheless, more than 75 percent of the counties within the historic range of the species contain prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003).

For specific sites in Nebraska, 100 acres of black-tailed prairie dog occupied habitat were estimated at Enders Wildlife Management Area in Chase County and 863 acres at Oglala NG in Sioux County (Fritz, NGPC, in litt. 2002). Thompson (USFS, in litt. 2002) provided a more recent estimate for Oglala NG of 1,275 acres of occupied habitat. This estimate represents an increase of 47 percent from the previous estimate in 2001. Table 1b presents long-term trends for Oglala NG.

NEW MEXICO - Based upon evaluations of remote sensing data, about 60,000 acres of black-tailed prairie dog occupied habitat existed Statewide in 2002 (Bell, New Mexico Department of Game and Fish (NMDGF), in litt. 2002 and Thompson, NMDGF, in litt. 2003). Ground-truthing of this estimate is currently underway (Johnson et al. 2003). The FWS estimate (based upon a sum of site-specific estimates) in the 2000 12-month finding was 39,000 acres of occupied habitat. The 1961 BSFW estimate was about 17,000 acres.

There are no extant complexes greater than 5,000 acres or 1,000 acres in New Mexico. Less than 10 percent of the total occupied acreage in New Mexico occurs in complexes greater than 1,000 acres. The black-tailed prairie dog appears to be largely absent from western portions of its historic range in New Mexico. Nevertheless, more than 75 percent of the counties within the historic range of the species contain prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c).

For specific sites, the U.S. Army provided an estimate of 330 acres of black-tailed prairie dog occupied habitat at a Fort Bliss facility in New Mexico (Hoefert, U.S. Army, in litt. 2002). This estimate is the same as that reported in 2001.

NORTH DAKOTA – Based upon aerial surveys and ground-truthing, a minimum of 20,000 acres of black-tailed prairie dog occupied habitat existed Statewide (including on Tribal lands) in 2003 (McKenna, NDGFD, in litt. 2003). The FWS estimate (based upon Sidle, USFS, pers. comm. 1999) in the 2000 12-month finding was 25,000 acres of occupied habitat. The 1961 BSWF estimate was about 20,000 acres.

North Dakota has the smallest recent State occupied habitat estimate with about 20,000 acres in 540 active colonies (Knowles 2003). Knowles (2003) describes two complexes or metapopulations – one being connected to metapopulations in South Dakota, and the other quite disjunct from other populations. According to Luce (Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003), there are no extant complexes greater than 5,000 acres in North Dakota. One complex is greater than 1,000 acres, but less than 10 percent of the total occupied acreage in North Dakota occurs in complexes greater than 1,000 acres. Black-tailed prairie dog populations appear to be widely distributed in North Dakota with 81 percent of the counties within the historic range of the species containing prairie dogs (Knowles 2003).

For specific sites, 290 acres of black-tailed prairie dog occupied habitat were estimated at Fort Berthold Reservation, following mapping in 2003 (Vosburgh, Intertribal Consortium, in litt. 2003). There was an estimated 2,026 acres of occupied habitat on the Little Missouri NG (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003).

OKLAHOMA - Based upon aerial surveys, the Oklahoma Department of Wildlife Conservation (ODWC) estimated 64,000 acres of black-tailed prairie dog occupied habitat Statewide in 2003 (Hoagland, ODWC, pers. comm. 2003). Approximately 50 percent of the area has been ground-truthed to date, with 38,700 acres verified as active (Duffy, ODWC, in litt. 2003). The FWS estimate (based upon Lomolino and Smith 2001) in the 2000 12-month finding was 9,000 acres of occupied habitat. The 1961 BSWF estimate was about 15,000 acres.

There do not appear to be any complexes greater than 5,000 acres or greater than 1,000 acres in Oklahoma. The black-tailed prairie dog appears to be largely absent from eastern portions of its historic range in Oklahoma. Nevertheless, more than 75 percent of the counties within the historic range of the species contain prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c).

For specific sites, 13,523 acres of black-tailed prairie dog occupied habitat were estimated to exist in Cimarron County (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002b). Table 1b presents long-term trends for Cimarron County.

SOUTH DAKOTA – In 2003, a partial estimate was provided for South Dakota of more than 200,000 acres of black-tailed prairie dog occupied habitat, including Tribal lands (Cooper and Gabriel, South Dakota Department of Game, Fish, and Parks (SDDGFP) and South Dakota Department of Agriculture, in litt. 2004). Subsequently, a draft management plan was released that estimated, based on aerial surveys, 407,000 acres of black-tailed prairie dog occupied habitat Statewide (South Dakota Department of Agriculture and SDDGFP 2004). This included an estimated 215,000 acres of occupied habitat on Tribal lands and 192,000 acres on non-Tribal lands. The FWS estimate (based upon Sidle, USFS, pers. comm. 1999) provided in the 2000

12-month finding was 147,000 acres of occupied habitat. The 1961 BSFW estimate was about 33,000 acres.

There are four extant complexes greater than 5,000 acres. More than 10 percent of the total acreage in South Dakota occurs in complexes greater than 1,000 acres. The black-tailed prairie dog appears to be widely distributed in South Dakota with at least 91 percent of the counties within the historic range of the species containing prairie dogs (South Dakota Department of Agriculture and SDDGFP 2004).

For specific sites, 4,800 acres of black-tailed prairie dog occupied habitat were mapped at Badlands National Park in 2002 (Albertson, National Park Service (NPS), in litt. 2002) and 5,600 acres in 2003 (Albertson, NPS, in litt. 2003). This represents a 17 percent increase from 2002 to 2003. Turner Endangered Species personnel estimated 1,443 acres of occupied habitat at Bad River Ranch in 2003 (Bly Honness, Turner Endangered Species Fund, in litt. 2003), an 11 percent increase from 2002. Morgenstern (Ellsworth Air Force Base, in litt. 2003) reported 95 acres of occupied habitat on Ellsworth Air Force Base and 800 acres on the Badlands Bomb Range in 2003. The Lower Brule Sioux Tribe estimated 2,940 acres of occupied habitat in 2003 (Lewis, Lower Brule Sioux Tribe, in litt. 2003). Newspaper interviews of Tribal representatives reported approximately 100,000 acres of occupied habitat at Pine Ridge/Oglala Sioux Reservation and 50,000 acres of occupied habitat at Rosebud Sioux Reservation in 2003 (Miller 2004). The South Dakota Black-Tailed Prairie Dog Management Plan estimates approximately 89,000 acres of occupied habitat at Pine Ridge/Oglala Sioux Reservation and approximately 39,000 acres of occupied habitat at Rosebud Sioux Reservation in 2004 (South Dakota Department of Agriculture and SDDGFP 2004). Thompson (USFS, in litt. 2002) estimated 18,105 acres of occupied habitat at Buffalo Gap NG, 642 acres at Fort Pierre NG, and 1,787 acres at Grand River NG in 2002. Table 1b presents long-term trends for Buffalo Gap NG, Fort Pierre NG, and Grand River NG.

TEXAS - The Texas Parks and Wildlife Department (TPWD) provided a preliminary Statewide estimate in 2002 of 236,000 acres of black-tailed prairie dog occupied habitat based upon 1996-97 digital ortho-photo quadrangle interpretation (Young, TPWD, in litt. 2002). The TPWD proposed to review 2003 satellite imagery for select counties to determine any changes in occupied habitat from 1996-97 to 2003. Ground-truthing has been completed for 70 out of 78 counties for a current minimum of 178,000 acres of occupied habitat (Holdstock, TPWD, in litt. 2003). The FWS estimate (modified from Cheateam 1977) in the 2000 12-month finding was 71,000 acres of occupied habitat. The 1961 BSFW estimate was about 26,000 acres.

There are no extant complexes greater than 5,000 acres or 1,000 acres in Texas. Less than 10 percent of the total occupied acreage in Texas occurs in complexes greater than 1,000 acres. The black-tailed prairie dog appears to be widely distributed in Texas. More than 75 percent of the counties within the historic range of the species contain prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c).

For specific sites, about 700 acres of occupied habitat were estimated at the City of Lubbock Land Application Site (Fuquay 2004). County estimates are under development by the TPWD.

WYOMING - Luce (Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003) estimated 125,000 acres of black-tailed prairie dog occupied habitat Statewide in 2003. This estimate is equal to the FWS estimate (based upon a projected decline from Wyoming Game and Fish Department's (WGFD) 1987 estimate) in the 2000 12-month finding. The 1961 BSFW estimate was about 49,000 acres. The WGFD is currently mapping towns from 2001 color infrared aerial photos and field checking a significant portion of the towns mapped (Rothwell, WGFD, in litt. 2003).

There is one extant complex greater than 5,000 acres in Wyoming. We are unaware of any additional complexes greater than 1,000 acres. It appears that less than 10 percent of the total occupied acreage in Wyoming occurs in complexes greater than 1,000 acres. The black-tailed prairie dog appears to be widely distributed throughout most of its historic range in Wyoming. More than 75 percent of the counties within the historic range of the species contain prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c).

Plague has resulted in notable declines in the State's largest identified complex at Thunder Basin NG. Thunder Basin NG was estimated to contain about 9,000 acres of occupied habitat in 2003 following a plague epizootic (Byer, USFS, pers. comm. 2003). Approximately 18,000 acres of occupied habitat existed in 2000 prior to plague (Thompson, USFS, in litt. 2002). Another way to evaluate the impacts of plague at this site is to examine the number of colonies impacted. In 2002, the WGFD reported that only 11 percent of the colonies surveyed at Thunder Basin NG were still active (Wichers, WGFD, in litt. 2002). Table 1b presents long-term trends for Thunder Basin NG.

For other specific sites, the U.S. Army provided an estimate of 700 acres of black-tailed prairie dog occupied habitat at the Sheridan Training Area in 2002 (Hoefert, U.S. Army, in litt. 2002). This was the same as the estimate provided in 2001. Cheatham (NPS, in litt. 2003) reported 40 acres of occupied habitat at Devils Tower National Monument in 2003.

CANADA - No new estimates of black-tailed prairie dog occupied habitat have been provided since 2001. The most recent estimate is 2,589 acres of occupied habitat (Fargey, Grasslands National Park, in litt. 2001). This estimate is similar to the FWS estimate in the 2000 12-month finding of 2,000 acres of occupied habitat, all at Grasslands National Park in Saskatchewan.

In general, population estimates of the black-tailed prairie dog in Canada appear to be stable, but small (see Table 1a).

MEXICO - No new estimates of black-tailed prairie dog occupied habitat have been provided since 2001. The most recent estimate is more than 49,000 acres of occupied habitat, almost all of it at one site near Janos, Chihuahua (List in litt. 2001). The FWS estimate in the 2000 12-month finding was 90,000 acres of occupied habitat. List (in litt. 2001) also noted that 2,889 acres of occupied habitat had been lost (50 percent of that due to conversion of rangeland to cropland), but that the large difference from earlier estimates for the site was due to earlier mapping errors and did not represent an actual loss of occupied habitat.

In general, population estimates of the black-tailed prairie dog in Mexico appear to be stable in recent decades (see Table 1a). The species appears to be absent from much of its historic range in Mexico.

State agencies now estimate approximately 1,842,000 acres of occupied habitat across the United States as opposed to an estimate of 364,000 acres in 1961. As noted above, evaluation of prairie dog population status is based on amount of occupied habitat, not numbers of individual animals. However, many people are interested in the estimated numbers of prairie dogs. Estimates of black-tailed prairie dog density typically range from between 2 to 18 animals per acre, with an average of 10 per acre. Applying these density estimates to the acreage figures generates an estimated population of black-tailed prairie dogs ranging between 3,684,000 and 33,156,000, with the average density figure yielding an estimated population of 18,420,000 black-tailed prairie dogs in the United States. This estimate of the abundance of the black-tailed prairie dog has implications for our analysis of the threats faced by black-tailed prairie dog described below.

Below is an analysis of the threats faced by the black-tailed prairie dog, placed within a frame of reference of the above information.

THREATS: The ESA directs us to determine whether any species is a threatened or endangered species because of any of the following factors:

- The present or threatened destruction, modification, or curtailment of its habitat or range;
- Overutilization for commercial, recreational, scientific, or educational purposes;
- Disease or predation;
- The inadequacy of existing regulatory mechanisms;
- Other natural or manmade factors affecting its continued existence.

As noted above, the FWS must make a judgment through an evaluation of these factors whether the status of a species meets the ESA's definition of "endangered" or "threatened," using the best scientific and commercial data available.

Historically, three major impacts have had a substantial influence on black-tailed prairie dog populations. The first major impact on the species was the initial conversion of prairie grasslands to cropland in the eastern portion of its range from about the 1880s to the 1920s. The second major impact was large-scale chemical control efforts to reduce competition between prairie dogs and domestic livestock conducted from about 1918 to 1972. The third major impact was the inadvertent introduction of an exotic disease, plague, from the Old World into North American ecosystems around 1900, with the first recorded impacts in published literature on the black-tailed prairie dog in 1946 (Miles et al. 1952). Recurring declines and recovery have occurred in remaining black-tailed prairie dog populations.

The information we have received regarding effects on black-tailed prairie dog populations due to various factors and potential threats related to these factors is evaluated below.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range.

In the 2000 12-month finding, we concluded that effects due to the present or threatened destruction, modification, or curtailment of habitat or range were a moderate, imminent threat. No changes regarding the magnitude or immediacy of threat from this factor were made in our assessment of the species and resubmitted petition finding in 2001 (66 FR 54808, October 30, 2001). Our 2002 assessment and resubmitted petition finding (67 FR 40657, June 13, 2002) addressed habitat threats individually. We concluded that the present or threatened destruction of habitat from agricultural conversion and other factors was no longer a threat. We concluded that the present or threatened modification of habitat due to the presence of plague was a moderate, imminent threat. We concluded that the present curtailment of habitat due to chemical control was no longer a threat and the threatened curtailment of habitat was a low magnitude, non-imminent threat.

Historically as many as 100 million acres of occupied black-tailed prairie dog colonies occurred across a landscape of approximately 400 million acres of potential habitat (Black-footed Ferret Recovery Foundation, in litt. 1999a, Fagerstone and Ramey 1996, Knowles 1998, Seton 1953). At present, there are an estimated 1,842,000 acres of occupied habitat in the United States. Habitat destruction resulted from cropland development, urbanization, changes in vegetative communities, burrow deterioration, and fragmentation. The most substantial cause of habitat destruction that we are able to quantify is cropland development. Conversion of the native prairie to cropland has largely progressed across the species' range from east to west, with the more intensive agricultural use in the eastern portion of the species' range. Black-tailed prairie dog use of potential habitat is somewhat, but not completely, limited by this conversion. Approximately 37 percent of the suitable habitat within its range has been converted to cropland uses (Black-footed Ferret Recovery Foundation, in litt. 1999b). However, the 2000 12-month finding noted that the current threat of habitat loss through cropland conversion is much less than in the early days of agricultural development in the Great Plains and that a considerable amount of potential unoccupied habitat remains.

The Natural Resources Conservation Service quantified land cover/land use changes from 1982 to 1997 (U.S. Department of Agriculture 2000). The 11 States within the historic range of the black-tailed prairie dog experienced a 10 percent loss of cropland and a 2 percent loss of rangeland during this time period. However, when the amount of current occupied habitat is contrasted with the amount of remaining rangeland (potential habitat), estimated in the hundreds of millions of acres, it is evident that sufficient potential habitat still occurs in each of the 11 States within the historic range of the species to accommodate large expansions of black-tailed prairie dog populations (U.S. Department of Agriculture 2000). This conclusion is supported by Sidle et al. (2001), who noted that, although substantial areas of grassland have been converted to cropland in the northern Great Plains, vast areas of suitable habitat for colonization and expansion of black-tailed prairie dogs remain.

Rosmarino (Forest Guardians et al., in litt. 2003a and 2003b) expressed concern regarding the substantial loss of habitat due to urbanization along the Colorado Front Range. We acknowledge that urbanization is an ongoing factor in habitat loss along the Front Range. In the 2000 12-month finding, we noted that urbanization represents a locally substantial loss of occupied habitat, but in a range-wide context it is not significant. We continue to believe that, given

population estimates in Colorado and elsewhere, urbanization cannot be considered a threat at present or in the foreseeable future, either in Colorado or range-wide.

Gilpin (University of California, in litt. 2001) considered habitat fragmentation, which decreases colony and metapopulation size, a serious threat that could impact future viability of the black-tailed prairie dog. However, Luce (Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c) suggested that fragmentation of habitat and scattered distribution may have isolated black-tailed prairie dog populations and prevented plague from impacting them. He noted that it is important to recognize the presence and value of “small, remnant populations.” This issue is more thoroughly discussed under Factor C.

We continue to conclude that present or threatened habitat destruction is not a threat to the species, although considerable effects due to this factor have occurred in the past. Additionally, we now conclude that present or threatened habitat modification as it relates to plague is not a significant threat to the species given the analysis that follows under Factor C. Threatened habitat curtailment as it relates to chemical control is not a significant threat to the species given the analysis that follows under Factor E.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes.

In the 2000 12-month finding, we concluded that effects due to scientific or educational purposes and commercial use of the species via the pet trade were not threats to the species. These conclusions were reaffirmed in our assessments of the species in 2001 and 2002. We continue to believe these factors are not threats pursuant to the definitions of the ESA.

The 2000 12-month finding also concluded that recreational shooting could be a low, imminent threat in some circumstances. No changes regarding the magnitude or immediacy of threat from this factor were made in our 2001 assessment. In the 2002 assessment we determined that recreational shooting did not rise to the level of a threat to the species.

Knowles (2003) noted extensive recreational shooting in North Dakota, but found no clear evidence that shooting controlled prairie dog populations. Rosmarino (Forest Guardians et al., in litt. 2003a and 2003b) suggested that density is reduced, that small colonies have been extirpated by shooting, and that larger colonies could be reduced. Reeve and Vosburgh (in draft) concluded that interest in and intensity of recreational shooting has increased dramatically over the past decade and that shooting can cause changes in prairie dog behavior and reproductive success. However, they also noted that prairie dog populations are capable of recovering from shooting.

Some of the States with substantial amounts of public lands are experiencing greater shooting pressure on prairie dogs in some areas than previously estimated, and are implementing regulations to better monitor and control this activity. These regulations are described under Factor D.

We are aware that recreational shooting can reduce black-tailed prairie dog population densities at specific sites, and acknowledge the possibility that extirpation may have occurred in isolated circumstances (Knowles 1988), but black-tailed prairie dog populations can recover from very

low numbers following intensive recreational shooting (Knowles 1988, Reeve and Vosburgh in draft). Therefore, we continue to conclude that effects due to recreational shooting do not rise to the level of a threat pursuant to the definitions of the ESA. Recent Statewide and range-wide estimates of occupied habitat further reinforce this conclusion.

C. Disease or Predation.

In the 2000 12-month finding, we concluded that predation was not a threat. This conclusion was reaffirmed in our 2001 and 2002 Candidate Assessments. We continue to believe this factor is not a threat pursuant to the definitions of the ESA.

The 2000 12-month finding concluded that disease was a moderate, imminent threat. No changes regarding the magnitude or immediacy of threat from disease were made in our 2001 or 2002 assessments.

Although plague is likely the most important factor adversely influencing black-tailed prairie dogs, recent information indicates the populations are not as vulnerable to the disease as previously thought. Plague is an exotic disease foreign to the evolutionary history of North American species. It is caused by the bacterium *Yersinia pestis*, which fleas acquire from biting infected animals and can then transmit via a bite to other animals. The disease also can be transmitted pneumonically directly among infected animals. Some rodent species may act as carriers of the disease or infected fleas with little or no symptoms. Black-tailed prairie dogs cannot be considered carriers because of their high mortality rate (Barnes 1993, Cully and Williams 2001).

Plague was first observed in wild rodents in North America near San Francisco, California, in 1908 (Eskey and Haas 1940). The first reported incidences of plague in black-tailed prairie dogs occurred in the 1940s (Gage, Center for Disease Control, pers. comm. 1999, Miles et al. 1952). Evidently, plague spread from the west coast to its present easterly limit in about 50 years. Plague is currently limited to the western two-thirds of the black-tailed prairie dog range (perhaps due to some unknown ecological limitations) (Barnes 1993). Black-tailed prairie dog habitat in all of Montana, Wyoming, Colorado, New Mexico, and Arizona is impacted by plague. Portions of western North Dakota, Nebraska, Kansas, Oklahoma, and Texas have records of plague in black-tailed prairie dogs. Black-tailed prairie dog habitat in the eastern portions of these same States and all of South Dakota are free of plague.

The major effects of plague on black-tailed prairie dogs are to reduce colony size, increase variance in colony populations, and increase inter-colony distances within complexes (Brand 2002). Recently documented plague outbreaks include Bent County, Fort Carson, Pinon Canyon, and Rocky Mountain Arsenal in Colorado; Crow and Fort Belknap Reservations in Montana; Kiowa NG and Rita Blanca NG in Texas and Oklahoma; and Thunder Basin NG in Wyoming. The plague epizootic at Thunder Basin was particularly notable because the location was one of the few remaining complexes greater than 10,000 acres, and the epizootic brought plague close to some of the last remaining large plague-free complexes found in South Dakota.

In our 2000 12-month finding, we focused attention on a few large black-tailed prairie dog populations impacted by plague and extrapolated population losses at these sites across the species' entire range. Based on generally accepted conservation biology principles (Gilpin and Soule 1986, Hanski and Gilpin 1997, MacArthur and Wilson 1967, Miller et al. 1996, Shaffer 1981, Wilcove et al. 1986, and Wilcox and Murphy 1985), we presumed that smaller black-tailed prairie dog populations had been and would be similarly or more adversely impacted. An approximate 50 percent decline per decade was predicted for the foreseeable future. Much better information is now available. Given recent population estimates across a majority of the species' range, it appears the previously hypothesized projections were invalid. While occupied habitat at specific large complexes may experience dramatic fluctuations due to plague epizootics, they do not appear to be influencing the species' range-wide persistence.

Recent data indicate that, in some portions of the species' range, some colonies recover and may approach pre-plague population levels following plague epizootics. At Comanche NG in Colorado, approximately 4,500 acres of black-tailed prairie dog occupied habitat were estimated to exist on the Carrizo Unit of Comanche NG in 1995. In 1996, all of the towns inspected had experienced total or near total extirpation. No fleas were collected to facilitate plague surveillance, but the pattern of widespread elimination of prairie dog colonies was the pattern expected from sylvatic plague. Plague was documented the following year in a nearby colony. In 1998, approximately 500 acres of occupied habitat were found on the grassland's Carrizo Unit (Cully 1998). Data are not available from the Carrizo Unit for subsequent years, but throughout the entire Comanche NG, 1,374 acres of occupied habitat were present in 1998 (Sidle, USFS, in litt. 1999). Occupied habitat at Comanche NG increased to 1,974 acres in 1999 (Thompson, USFS, in litt. 2002), 4,342 acres in 2001 (Cully and Johnson 2002), and 5,886 acres in 2002 (Cully and Johnson 2002). Cully and Johnson (2002) noted that "colony area on the Comanche NG is similar to what was present before the die-off there in 1994-95."

At Cimarron NG in Kansas, plague was documented in 1949, 1997, and 1999 (Cully and Williams 2001). Nevertheless, as noted in Table 1b, populations appear to be increasing in recent years, with occupied habitat estimates of 1,287 acres in 1998 (Sidle, USFS, in litt. 1999), 1,688 acres in 1999 (Thompson, USFS, in litt. 2002), 2,639 acres in 2001 (Thompson, USFS, in litt. 2002) and 3,321 acres in 2002 (Cully and Johnson 2002). Cully and Johnson (2002) noted that "colony area on the Cimarron NG is the highest ever recorded." Other examples of population recovery are discussed in the Distribution, Abundance, and Trends section of this document and presented in Table 1b. The severity of plague outbreaks may vary, with severe outbreaks and limited recovery occurring at some complexes (Rocky Mountain Arsenal, Colorado, and Ft. Belknap and Northern Cheyenne Reservations in Montana) and less severe outbreaks with apparently complete or near complete recovery at other sites (Cimarron NG and Comanche NG).

Recent laboratory research indicates that at low levels of exposure a small percentage of black-tailed prairie dogs show some immune response and consequently some resistance to plague (Rocke, U.S. Geological Survey (USGS), pers. comm. 2002), similar to what has been reported in Gunnison's (Cully et al. 1997) and white-tailed prairie dogs (Biggins, USGS, pers. comm. 2002). The Center for Disease Control recently reported that seroconversion (evidence of some immune response) occurred in 2 out of 65 black-tailed prairie dogs collected following a

plague event at Pawnee NG in Colorado (Antolin, Colorado State University, pers. comm. 2002). Nevertheless, an individual black-tailed prairie dog exposed to plague is at high risk due to a combination of low resistance and high sociality (Biggins and Kosoy 2001).

It has been suggested that the responses of black-tailed prairie dog populations to plague may vary based on their population density (Cully, USGS, pers. comm. 2002). The likelihood of plague transmission in prairie dogs from flea bites versus pneumonically from other prairie dogs already infected is unknown, but is being investigated. It may be that survival of some individuals in low-density or isolated populations is facilitated by the necessity of high exposure rates for individuals to contract the disease. Single or even multiple flea bites do not always have a high enough dose for infection to occur (Rocke, USGS, pers. comm. 2002). In contrast, if plague is spread pneumonically from animal to animal, a much larger dose is transferred than from a flea bite. In such situations, the impact on a large, densely populated complex could be substantial. A population dynamic may have developed that somewhat protects low-density, isolated black-tailed prairie dog populations from extirpation, even with infected fleas resident in the habitat of surviving prairie dogs.

Lomolino et al. (2003) postulated that habitat fragmentation may benefit some prairie dog populations by protecting them from plague through isolation. Historically, black-tailed prairie dogs were typically found in large complexes that consisted of many colonies that were close enough to each other to allow frequent dispersal between colonies. Currently, due to a combination of factors including habitat fragmentation, plague, and poisoning, many prairie dogs exist in much smaller complexes or in isolated colonies where the possibility for interchange is reduced. Smaller populations also may be protected by limiting exposure via direct animal-to-animal contact (Cully and Williams 2001, Roach et al. 2001). Influences other than plague likely will still adversely affect small black-tailed prairie dog populations, but they have not been demonstrated to be as serious as plague.

Trudeau (2002) noted that “sylvatic plague epizootics have the potential to cause severe population bottlenecks in black-tailed prairie dog colonies contributing to losses of alleles and decreases in heterozygosity. Plague could potentially devastate genetic variability in affected prairie dog colonies, causing inbreeding depression in the short-term and inability to adapt to environmental change in the long-term.” However, the author also noted that “even though a significant reduction in heterozygosity was observed in plagued colonies, gene flow may balance the effects of the sylvatic plague by reintroducing levels of variation in genetically depauperate post-plague colonies . . . Given time, gene flow should erase the effects of plague on genetic variability assuming that colonies receive an adequate number of migrants to reintroduce genetic variability and population size is stable following recovery.” Roach et al. (2001) noted that extinction and recolonization by black-tailed prairie dogs in the presence of plague has not increased genetic differentiation among prairie dog colonies in north-central Colorado. Dispersal has been adequate to prevent genetic isolation.

In 2003, monkeypox was detected in pet prairie dogs in Wisconsin, Illinois, and Indiana. The source of the infection was a shipment of rodents from Africa. The disease was never found in any wild prairie dogs or other wild rodents (Center for Disease Control 2003). Consequently, we do not consider this disease to be a threat to black-tailed prairie dogs.

We continue to conclude that effects on black-tailed prairie dog populations due to predation are not a threat to the persistence of the species. Our previous conclusions regarding the perceived effects of plague on the persistence of the species have been altered by information indicating that – (1) high exposure doses of plague bacilli may be necessary for disease contraction in some individuals, (2) limited immune response has been observed in some individuals, (3) a population dynamic may have developed in low-density, isolated populations that contributes to the persistence of these populations, (4) the apparent ability of some sites to recover to pre-plague levels after a plague epizootic; and (5) approximately one-third of the species' historic range has not been affected by plague. Based on both the new information above and recent State-by-State range-wide estimates of occupied habitat that indicate species abundance, plague no longer appears to be as significant a threat as previously thought. We predict that plague will continue to influence black-tailed prairie dog population dynamics to a degree. However, we now conclude that plague in combination with other factors is not likely to cause the black-tailed prairie dog to become an endangered species within the foreseeable future.

D. The Inadequacy of Existing Regulatory Mechanisms.

In the 2000 12-month finding, we concluded that the inadequacy of existing regulatory mechanisms was a moderate, imminent threat. No changes regarding the magnitude or immediacy of threat from this factor were made in our 2001 assessment. In our 2002 assessment, the threats due to inadequate regulatory mechanisms were addressed separately as they related to habitat curtailment, recreational shooting, disease, and chemical control. The regulatory concerns as they pertained to recreational shooting were not considered a threat (since regulatory shooting was not considered a threat). The regulatory concerns as they pertained to chemical control were considered low, non-imminent threats. The regulatory concerns as they pertained to disease were considered a moderate, non-imminent threat.

In this finding we have addressed the regulatory concerns as they relate to disease in factor C. We have discussed chemical control under factor E, and we have dealt with recreational shooting under factor B. We have found disease to be a low-level, non-imminent threat, chemical control not to be a threat, and recreational shooting not to be a threat. Given that these issues have not been identified as threats, there is no immediate need to consider whether efforts to regulate them are adequate.

However, we have considered the current status of State, Tribal, and Federal regulatory mechanisms, as well as any proposed changes. Beginning in 1998, representatives from each State wildlife agency within the historic range of the species came together to form the Prairie Dog Conservation Team. The Team developed “A Multi-State Conservation Plan for the Black-tailed Prairie Dog, *Cynomys ludovicianus*, in the United States” (Luce 2002). The purpose of this Multi-State Plan was to provide standards for the 11 States to use in future management of the species. The Multi-State Conservation Plan lists the following minimum 10-year target objectives – (1) Maintain at least the currently occupied acreage of black-tailed prairie dogs in the United States; (2) Increase to at least 1,693,695 acres of occupied black-tailed prairie dog acreage in the United States by 2011; (3) Maintain at least the current black-tailed prairie dog occupied acreage in the two complexes greater than 5,000 acres that now occur on and adjacent

to Conata Basin-Buffalo Gap NG, South Dakota, and Thunder Basin NG, Wyoming; (4) Develop and maintain a minimum of nine additional complexes greater than 5,000 acres (with each State managing or contributing to at least one complex greater than 5,000 acres) by 2011; (5) Maintain at least 10 percent of total occupied acreage in colonies or complexes greater than 1,000 acres by 2011; (6) Maintain distribution over at least 75 percent of the counties in the historic range or at least 75 percent of the historic geographic distribution” (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003). Support for these objectives and progress in meeting them varies widely across States.

What follows is a State-by-State summary of existing regulatory measures with a specific focus on recreational shooting, chemical control, and management goals designed to ameliorate the influences of plague and other lesser impacts:

ARIZONA - In 1999, the hunting season for black-tailed prairie dogs, which are extirpated from the State, was closed year-round (Shroufe, Arizona Game and Fish Department (AGFD) in litt. 2002).

Arizona requires a permit and training for toxicant use. Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

Arizona is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). The black-tailed prairie dog is listed as endangered on the Arizona “Threatened Native Wildlife” list (AGFD 1988). Currently, the AGFD classifies both prairie dog species native to the State (black-tailed and Gunnison’s) as nongame mammals. The AGFD submitted their black-tailed prairie dog management plan (Van Pelt et al. 2001) to the Commission in October 2001. The Commission did not approve the management plan, but directed the AGFD to continue the 12-step process of reintroduction planning. The State is currently on step 6 of the 12-step process (Shroufe, AGFD, in litt. 2003). The draft management plan currently supports all of the 10-year objectives presented in the Multi-State Plan, but does not currently meet any of the objectives.

COLORADO - Currently, the CDOW considers the black-tailed prairie dog a game species. The CDOW Commission prohibited sport hunting of the species year-round on public and private lands effective September 1, 2001. However, landowners and their designated agents are allowed to shoot prairie dogs causing damage to their property.

Chemical control is jointly regulated by the Colorado Department of Agriculture and the CDOW. The CDOW designates the species as small game. Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs. No information on the extent of this activity is available (Pusateri, CDOW, in litt. 2002; Russell, CDOW, in litt. 2003). Six counties have resolutions requiring 0.25-mile buffers of chemical control around prairie dog towns. One county has a \$15,000 per day fine for not controlling prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002b).

In 1999, the State Legislature passed a bill prohibiting translocation of prairie dogs and other species without consent of the receiving county’s commissioners (Van Pelt 1999). A pilot

landowner incentive program is currently funded for 3 years at \$600,000. This would allow approximately 20,000 acres of occupied habitat to be enrolled. One 5-year contract for 1,400 acres has been signed, and there are three other applicants Statewide (Pusateri, CDOW, in litt. 2002).

Colorado is not a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). An intrastate Memorandum of Understanding for Prairie Dog Management in Colorado was signed in 2000 by Colorado and several Federal agencies (Pusateri, CDOW, in litt. 2001). A Conservation Plan for Grassland species in Colorado (including the black-tailed prairie dog) was finalized in November 2003 (CDOW 2003). This plan supports and currently exceeds all of the 10-year objectives presented in the Multi-State Plan. Rosmarino (Forest Guardians et al., in litt. 2003b) opposes the State's Conservation Plan, particularly the current estimate of occupied habitat; the plan to address threats; the management of recreational shooting; the treatment of urban colonies; the attention to keystone attributes; and the perceived partiality toward landowners and industry.

KANSAS - Currently, the KDWP requires a hunting license to shoot prairie dogs for residents and nonresidents. The season is year-round with no limits (Mitchener, KDWP, in litt. 2003).

Currently the black-tailed prairie dog is classified as wildlife in Kansas. There are no laws in Kansas that legally classify it as a pest (Kansas Black-tailed Prairie Dog Working Group 2002). A prairie dog control permit is required to use any poisonous gas or smoke, but a permit is not required for above ground toxicants (Mitchener, KDWP, in litt. 2003). In recent years, some counties have invoked "Home Rule" to take authority for prairie dog control from the townships and impose mandatory control requirements. Landowners are given the opportunity to control prairie dogs on their land; if they fail to do so it is done by the county at the landowner's expense (Van Pelt 1999). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs. There has been an increase in this activity in some western counties in 2004, with the potential for localized reductions.

Kansas is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). Kansas has an approved management plan (Kansas Black-tailed Prairie Dog Working Group 2002), which includes among its objectives the establishment of regulatory protection. The draft management plan currently supports all of the 10-year objectives presented in the Multi-State Plan, but does not currently meet most of the objectives.

MONTANA - Currently, the MDFWP requires no license to shoot prairie dogs. In February 2002 the MDFWP and Commission adopted an annual rule providing year-round protection of black-tailed prairie dogs on black-footed ferret (*Mustela nigripes*) reintroduction lands in southern Phillips County and seasonal closure on public lands other than State school trust lands from March 1 through May 31 (Hagener, MDFWP, in litt. 2003). These regulations were adopted as a final biennial rule in 2003.

The MDFWP and Department of Agriculture classifies the species as non-game wildlife and provides information to landowners regarding control of prairie dogs if requested (Hagener, MDFWP, in litt. 2002 and 2003). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

Montana is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). The Montana Commission gave approval to the State's black-tailed prairie dog management plan (Montana Prairie Dog Working Group 2002). The MDFWP does not support the 10-year objective of 240,367 acres of occupied habitat for Montana developed by the Prairie Dog Conservation Team. The State management plan has adopted an objective of 125,000 to 145,000 acres. The State management plan does support and meet the other 10-year objectives presented in the Multi-State Plan.

NEBRASKA - Currently, Nebraska considers the black-tailed prairie dog an unprotected nongame species that can be taken in any manner without restrictions on shooting or control activities. Permits are not required for residents; nonresidents must have a small-game hunting permit. There is currently no season or restrictions of prairie dog shooting on private or public lands. In July 2002, Commission staff presented a recommendation to the Board of Commissioners to establish a shooting season from March 1 through June 14 on public lands and to designate the prairie dog as a "species in need of conservation." Neither recommendation was adopted (Fritz, NGPC, in litt. 2002).

Chemical control is considered the main adverse impact to black-tailed prairie dogs in Nebraska (Fritz, NGPC, in litt. 2002). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

Nebraska is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). A draft black-tailed prairie dog management plan has been completed (NGPC 2001). However, the NGPC staff has been instructed by the Board of Commissioners to cease work on any management plan (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002b). The draft management plan supports all of the 10-year objectives presented in the Multi-State Plan, but currently only meets the occupied habitat objective.

NEW MEXICO - Currently, the black-tailed prairie dog remains unprotected under State laws (MacMullin, FWS, in litt. 2003). New Mexico has no bag limits or seasons for shooting prairie dogs. Residents do not need a license. Nonresidents are required to have a current nonresident hunting license. Recreational shooting is prohibited on State Trust Lands (Thompson, NMDGF, in litt. 2003).

A license is required by the New Mexico Department of Agriculture for chemical control (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

New Mexico is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). A black-tailed prairie dog management plan has been finalized (New Mexico Black-tailed Prairie Dog Working Group 2001). The management plan calls for evaluating the

adequacy of existing regulations and supports the development of a CCAA. The management plan supports the Multi-State objectives for occupied habitat and for maintaining distribution over at least 75 percent of the counties within the species' historic range. It does not support the other Multi-State objectives. New Mexico currently only meets the objective to maintain distribution over at least 75 percent of the counties within the species' historic range (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c and 2003).

NORTH DAKOTA - Currently, the NDGFD classifies the black-tailed prairie dog as nongame. Residents are not required to have a hunting license to shoot prairie dogs. However, nonresidents are required to purchase a license (McKenna, NDGFD, in litt. 2003). There are no bag limits or seasons for prairie dogs (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003). The NDGFD discontinued the practice of issuing a guidebook to help shooters find prairie dog colonies.

The State Department of Agriculture considers the black-tailed prairie dog a pest (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003). The State Department of Agriculture and county weed boards have regulatory authority over control efforts (Van Pelt 1999). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

North Dakota is not a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). The State Legislative Assembly passed a resolution urging the FWS not to list the species (North Dakota Legislative Assembly, in litt. 1999). North Dakota has finalized a black-tailed prairie dog management plan (NDGFD 2001). The plan notes that the Department does not believe the species is threatened, does not support the 10-year objectives presented in the Multi-State Plan, but currently does meet the objective to maintain distribution over at least 75 percent of the counties within the species' historic range (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c and 2003). The plan's goal is to maintain a biologically viable population of the species in North Dakota. No specific regulatory changes have been proposed or enacted at present.

OKLAHOMA - Currently, a license for recreational shooting is required by residents and nonresidents. The season is year-round (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003).

The ODWC classifies the black-tailed prairie dog as a Category II Mammal Species of Special Concern and requires a permit prior to any chemical control. Prairie dog eradication is no longer mandatory in Oklahoma, but is assisted by some State and local governments (Duffy, ODWC, in litt. 2003). Prairie dogs cannot be reduced in any county to fewer than 1,000 individuals and control is not permitted on public lands (Van Pelt 1999). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

Oklahoma is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). A black-tailed prairie dog management plan (Hoagland 2001) has been finalized. Proposed management strategies include continued regulation of recreational shooting and chemical control. The management plan supports all of the 10-year objectives presented in the Multi-State

Plan, but currently only meets the objective to maintain distribution over at least 75 percent of the counties within the species' historic range (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c and 2003).

SOUTH DAKOTA - The SDDGFP Commission established a closure on recreational shooting on public lands from March 1 through June 14 (Cooper, SDDGFP, in litt. 2001).

The SDDGFP Commission passed a new State law, effective July 1, 2001, that removed the black-tailed prairie dog from the State list of declared pests and designated it a species of management concern. The South Dakota Legislature passed a bill in 2001 that directed the SDDGFP to prepare a management plan and bring it to the legislature for approval. If the plan proposes to restrict prairie dog control on private lands or include a landowner incentives program, legislative approval is required. Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs. Regulatory mechanisms pertaining to chemical control could influence black-tailed prairie dog populations in South Dakota due to the amount of poisoning which may occur (see Factor E).

South Dakota is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). A black-tailed prairie dog management plan was drafted and released in 2001 (South Dakota Prairie Dog Work Group 2001). However, a new task force representing ranchers, wildlife, conservation and State interests has redrafted the plan (South Dakota Department of Agriculture and SDDGFP 2004). The current draft plan supports and currently exceeds all of the 10-year objectives presented in the Multi-State plan.

TEXAS - Currently, the TPWD designates the black-tailed prairie dog as a nongame species. A license is required to hunt prairie dogs, but there is no season or bag limit (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003).

In 1999, a new regulation was established which requires a nongame collection or dealer's permit to possess more than 10 prairie dogs or to sell any number of prairie dogs (Van Pelt 1999). This law does not regulate the killing of prairie dogs for recreational, agricultural, or nuisance purposes. The Texas Health and Safety Code authorizes counties to control prairie dogs and gives Texas Department of Agriculture the responsibility of providing control information to requesting counties (Van Pelt 1999). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

Texas is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). State statutes prohibit listing the black-tailed prairie dog as a State endangered species. A black-tailed prairie dog management plan (Texas Black-tailed Prairie Dog Working Group 2004) is in final draft. The plan notes that the black-tailed prairie dog is a sensitive and declining species in Texas. Goals include the development of an amendment to change references to the species in State legislative regulations from pest species to non-game. In 2001, Texas prepared a draft CCAA. This plan has yet to be finalized (Texas Black-tailed Prairie Dog Working Group 2001). The draft management plan supports all of the 10-year objectives presented in the Multi-State Plan, but currently only meets the objective to maintain distribution over at least

75 percent of the counties within the species' historic range (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c and 2003).

WYOMING - Currently, the WGFD considers the black-tailed prairie dog a nongame wildlife species. No license is required to shoot prairie dogs, and there is no season, bag limit, or restriction on method of take (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2003).

The Wyoming Department of Agriculture lists the species as a pest. The Wyoming Weed and Pest Control Act of 1973 authorizes counties to enter private property to control prairie dogs if damage has been documented to neighboring landowners (Knowles 1995). Chemical control is limited to those pesticides legally permitted for use on black-tailed prairie dogs.

Wyoming is a signatory to the interstate Conservation Assessment and Strategy (Van Pelt 1999). A black-tailed prairie dog management plan has been drafted (Wyoming Black-tailed Prairie Dog Working Group 2001). Plan objectives include identifying possible regulatory changes. However, the draft plan was rejected by the Wyoming Game Commission in December 2001. The draft management plan supports all of the 10-year objectives presented in the Multi-State Plan, but currently only meets the objectives to maintain 1 complex greater than 5,000 acres and to maintain distribution over at least 75 percent of the counties within the species' historic range (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2002c and 2003). The WGFD officials have recently proposed broadening the black-tailed prairie dog plan into a more comprehensive native species grassland plan.

CHEYENNE RIVER SIOUX TRIBE (in South Dakota) - Currently, hunting seasons are year-round and without limits on Tribal lands. A permit is required. However, if prairie dog populations decline below management goals, season lengths and/or permit numbers will be restricted (Bourland and Dupris, Cheyenne River Sioux Tribe, in litt. 1998; Dikeman et al., Cheyenne River Sioux Tribe, in litt. 1999).

The Tribe does not classify the prairie dog as a pest and does not require or encourage their eradication. The Tribe drafted a Prairie Ecosystem Management Plan (Croxen et al. 1992) that prohibits chemical control on 44,100 acres of black-tailed prairie dog occupied habitat.

The Tribe has drafted a management plan and a preliminary umbrella CCAA. The Tribe agrees with the basic approach taken by the States' Prairie Dog Conservation Team to establish 10-year objectives and intends to manage for 13,000 acres on Tribal lands as a minimum acreage to be maintained (Larson, FWS, pers. comm. 2002). The Tribe currently exceeds the acreage goal for black-tailed prairie dog occupied habitat.

CROW CREEK SIOUX TRIBE (in South Dakota) - Currently the Tribe allows recreational shooting and notes that it appears to have no effect on prairie dog numbers (Miller, Crow Creek Sioux Tribe, in litt. 1998). A permit is required. The Tribe prohibits chemical control.

The Tribe has drafted a preliminary umbrella CCAA which suggests 1,000 acres as a minimum occupied habitat to be maintained. The Tribe currently exceeds the acreage goal for black-tailed prairie dog occupied habitat.

FORT BELKNAP TRIBE (in Montana) - The Tribe currently allows recreational shooting. A permit is required. Individuals with grazing permits are not allowed to poison prairie dogs without approval from the Tribe and Bureau of Indian Affairs (BIA) (Department of Fish and Wildlife 2002).

The Tribe has an approved management plan (Department of Fish and Wildlife 2002). The Tribe proposes to manage for 10,000 to 16,000 acres of black-tailed prairie dog occupied habitat. If occupied habitat falls below 10,000 acres, shooting and use of toxicants will be restricted or prohibited. The Tribe currently exceeds the acreage goal for black-tailed prairie dog occupied habitat.

LOWER BRULE SIOUX TRIBE (in South Dakota) - The Tribe currently allows recreational shooting. A permit is required (Lower Brule Sioux Tribe Department of Wildlife, Fish and Recreation 2001).

Chemical control is not limited except as to those pesticides legally permitted for use on black-tailed prairie dogs. No information on the extent of this activity is available. Under the proposed management plan, chemical control would be prohibited without a permit from their Department of Wildlife, Fish and Recreation and concurrence from BIA and the Tribal Chairman.

The Tribe has an approved management plan (Lower Brule Sioux Tribe Department of Wildlife, Fish and Recreation 2001). This management plan changes the status of the species from unprotected to protected. The plan states that the Tribe will manage the species at levels that will be at least 1 percent of the historic potential habitat, approximately 2,000 acres of black-tailed prairie dog occupied habitat. The Tribe currently exceeds the acreage goal for black-tailed prairie dog occupied habitat.

ROSEBUD SIOUX TRIBE (in South Dakota) - The Tribe currently allows recreational shooting. A permit is required (Department of Game, Fish and Parks 2002).

The Tribe has drafted a management plan (Department of Game, Fish and Parks 2002). It proposes that beginning in 2003, a permit will be required to poison prairie dogs on trust lands. The plan proposes to manage for 10,000 acres. The Tribe currently exceeds the acreage goal for black-tailed prairie dog occupied habitat.

OTHER TRIBES - Several other Tribes have participated in inter-tribal meetings and work groups and expressed an interest in developing management plans and CCAAs for the black-tailed prairie dog. These Tribes include – Crow (Montana), Northern Cheyenne (Montana), Fort Berthold (North Dakota), Three Affiliated Tribes (North Dakota), Standing Rock Sioux (North and South Dakota), Pine Ridge/Oglala Sioux (South Dakota), and Yankton Sioux (South Dakota)

(Vosburgh, Intertribal Prairie Ecosystem Restoration Consortium, in litt. 2003). No specific information regarding regulatory mechanisms was available for review.

U.S. AIR FORCE - Some black-tailed prairie dogs occur on Air Force installations. On Ellsworth Air Force Base and Badlands Bomb Range in South Dakota, no recreational shooting is allowed, but some chemical control has been conducted (Morgenstern, U.S. Air Force, in litt. 2003). Similarly, there is no recreational shooting, but some chemical control at Buckley Air Force Base in Colorado (Friese, U.S. Air Force, in litt. 2003).

U.S. ANIMAL AND PLANT HEALTH INSPECTION SERVICE - The U.S. Animal and Plant Health Inspection Service (APHIS) does not manage any Federal lands. However, it supports prairie dog control programs through its involvement in the field; grant-in-aid program to States; technical assistance to other State, Tribal, and Federal agencies, and private landowners; and distribution of toxicants. The APHIS is developing a national wildlife disease monitoring and surveillance system and a first emergency response system for detection of foreign animal diseases, including plague. The APHIS will partner with others, including the National Wildlife Health Lab, veterinarians, and wildlife biologists (Luce, Prairie Dog Conservation Team Interstate Coordinator, in litt. 2004).

U.S. ARMY - The U.S. Army manages an estimated 8,838 acres of black-tailed prairie dog occupied habitat on its lands (Hoefert, U.S. Army, in litt. 2002). Management policies vary depending on the installation. In general there is no recreational shooting or chemical control of prairie dogs. Prairie dog colonies also are avoided during field exercises. Some installations have ongoing plague research and/or management. No specific regulatory changes have been proposed or enacted.

U.S. BUREAU OF INDIAN AFFAIRS - The BIA's involvement in prairie dog control efforts has been principally through management of funding for prairie dog control programs on Tribal lands. As noted above, Tribal lands with an interest in black-tailed prairie dog management occur in Montana, North Dakota, and South Dakota, with South Dakota Tribal lands being the most important in terms of chemical control. The last large-scale chemical control effort for black-tailed prairie dogs occurred on the Pine Ridge/Oglala Sioux Reservation in South Dakota in the 1980s. Following control efforts on Pine Ridge, three additional extensive control efforts targeted for the Cheyenne River Sioux and Rosebud Sioux Reservations in South Dakota and Fort Belknap Reservation in Montana were halted due to concerns regarding the lack of available black-footed ferret reintroduction sites. The BIA is currently considering a large-scale chemical control effort on Tribal lands in South Dakota. This effort is discussed further in factor E below.

U.S. BUREAU OF LAND MANAGEMENT - The U.S. Bureau of Land Management (BLM) manages approximately 39,000 acres of black-tailed prairie dog occupied habitat on their lands and also manages substantial amounts of potential habitat (Lawton, BLM, in litt. 2003). The BLM manages prairie dogs to meet multiple-use resource objectives including production of livestock forage and prevention of prairie dog encroachment onto adjacent lands. In a memorandum dated June 22, 2000, BLM instructed all of its State Directors within the range of the species to "ensure that activities authorized, funded or carried out by BLM do not contribute to the need to list the black-tailed prairie dog." Several required actions on BLM-managed lands are specified

including – ensuring that no unauthorized control occurs, ensuring that conservation of the species is addressed in all grazing permit renewals and other activities, evaluating the need to restrict sport hunting, mapping all occupied habitat, and developing a monitoring strategy. An estimated 1,416 acres of occupied habitat on lands managed by BLM in Phillips County, Montana, are closed to recreational shooting (Haske, BLM, in litt. 2002; and Lawton, BLM, in litt. 2002).

U.S. ENVIRONMENTAL PROTECTION AGENCY - The Environmental Protection Agency does not manage any black-tailed prairie dog occupied habitat. It deals indirectly with prairie dog control through pesticide labeling programs, including restrictions to protect wildlife. Presently, labeling does not restrict prairie dog control, but does address concerns for the endangered black-footed ferret. No information regarding regulatory changes has been provided.

U.S. FISH AND WILDLIFE SERVICE - The FWS manages over 500 National Wildlife Refuges and their satellites, but only about 15 refuges, satellites, or Waterfowl Production Areas have black-tailed prairie dogs. Three refuges have a substantial amount of occupied habitat. On Charles M. Russell and UL Bend National Wildlife Refuges in Montana, 5,150 acres of occupied habitat are managed to enhance its value as a black-footed ferret reintroduction site (Matchett 1997). The Rocky Mountain Arsenal National Wildlife Refuge in Colorado manages black-tailed prairie dogs to support and enrich a diversity of wildlife and is attempting to recover populations subsequent to repeated plague epizootics (FWS 1998). The FWS has placed a moratorium on all recreational shooting and chemical control of the species on FWS lands (Clark, FWS, in litt. 2000).

U.S. FOREST SERVICE - Prior to the plague epizootic at Thunder Basin NG, the USFS managed approximately 57,789 acres of black-tailed prairie dog occupied habitat on its lands (Thompson, USFS, in litt. 2002). Occupied habitat has declined by approximately 12,000 acres since this estimate due to plague at Thunder Basin NG. In 1999, the USFS issued a nationwide directive limiting black-tailed prairie dog control on USFS lands to instances of human health or safety and instances of plague outbreak (Manning, USFS, in litt. 1999). A letter from the Forest Service Washington Office to Regional Foresters in the involved Forest Service Regions, (Furnish, USFS, in litt. 2000) further described additional USFS efforts to enhance conservation of the species including – (1) establishing shooting restrictions to assist in black-footed ferret recovery in portions of Buffalo Gap and Thunder Basin NG where the majority of occupied habitat on USFS lands exists; (2) designating the black-tailed prairie dog as a Sensitive Species and a Management Indicator Species; (3) amending Grassland Plans to increase occupied habitat; and (4) initiating monitoring. Citing the fact that most of the prairie dog control restriction direction given in the 2000 letter had been incorporated as standards into revised Land and Resource Management Plans that support over 70 percent of the prairie dog colonies on National Forest System lands, and noting that of the established conservation direction continues to apply, the USFS determined in February 2004 that the letter was no longer necessary and rescinded it (Thompson, USFS, in litt. 2004). Thus, USFS decisions regarding management activities involving the species, including chemical control, are occurring at a regional or more local level to allow more flexibility in prairie dog management. Based upon what has been reported to us since February, management and extent of chemical control by the USFS regarding prairie dogs has not changed; however, the decision of if or when to control will be at a more local level. For

example, in South Dakota, the USFS is considering chemical control around the edge of certain grasslands to minimize impacts to neighboring private landowners.

U.S. NATIONAL PARK SERVICE - Approximately 6,600 acres of black-tailed prairie dog occupied habitat exist on lands managed by the NPS (Given, NPS, in litt. 2000). Its policy is to conserve and recover the species wherever possible. Control is allowed for purposes of human health and safety, good neighbor relations, and to reduce conflicts with other park objectives.

CANADA - In Canada, only private landowners are permitted to shoot prairie dogs and chemical control is prohibited. The black-tailed prairie dog is designated as vulnerable by the Committee on the Status of Endangered Wildlife in Canada (Fargey, Grasslands National Park, in litt. 2001).

MEXICO - In Mexico, there is no shooting and little chemical control (List, in litt. 2001). The black-tailed prairie dog is listed as threatened by the Lista de las Especies Amerzadas, the official threatened and endangered species list of the Mexican Government (SEMARNAP 1994).

During the past few years some States and Tribes have made substantial progress in initiating management efforts for the black-tailed prairie dog, including completing surveys to provide more accurate estimates of occupied habitat, drafting management plans, enacting laws that change the status of the species from pest to a designation that recognizes the need for management, establishing regulations that allow for better management of recreational shooting, and setting future goals for occupied habitat that will address population management needs for disease and other threats.

However, there also is a failure by some States to formally approve management plans, a lack of acceptance by some States of 10-year habitat objectives developed by the Prairie Dog Conservation Team, and the apparent decision by some State Game Commission Boards to halt work on State management plans. Additionally, there remains a general absence of efforts by either State or Federal agencies to better monitor or regulate chemical control. Collectively, these concerns will constrain black-tailed prairie dog management with regard to chemical control and disease.

However, the Distribution, Abundance, and Trends data (as described above) indicate that inadequate regulatory mechanisms are not limiting black-tailed prairie dog populations at present nor are they likely to within the foreseeable future. Therefore, we now conclude that these concerns do not rise to the level of a threat.

E. Other Natural or Manmade Factors Affecting Its Continued Existence.

We consider chemical control of black-tailed prairie dogs and synergistic effects from all threats under this factor. Chemical control also is influenced by adequacy of regulatory mechanisms.

In the 2000 12-month finding we concluded that both chemical control and synergistic effects were moderate, imminent threats. No changes regarding the magnitude or immediacy of threat from this factor were made in our 2001 assessment. In the 2002 assessment we concluded that chemical control was a moderate, non-imminent threat. We concluded that synergistic effects

likely impact the species; however, we were unable to quantify those effects and consequently described the effects as not a threat due to a lack of information.

Organized prairie dog control from 1916 to 1920 included the poisoning of tens of millions of acres of western rangeland (Bell 1921). From 1937 to 1968, 30,447,355 acres of prairie dog occupied habitat were controlled (Cain et al. 1972). Of the lands controlled from 1937 to 1968, 75 percent were treated by 1950, with an average of more than 1.6 million acres treated annually. From 1951 to 1968, the average amount of prairie dog occupied habitat controlled annually decreased to approximately 430,000 acres per year. In the 1960s, several States reached their lowest estimates of black-tailed prairie dog occupied habitat (Table 1a). According to Cain et al. (1972), in the late 1960s the public became interested in Federal animal control programs, including prairie dog control, and this interest resulted in increased attention to ecological considerations. Several toxicants previously used for pest or predator control were banned. In 1972, Compound 1080, which was used extensively in early prairie dog control efforts, was banned by Presidential Executive Order 11643 for use on Federal lands, in Federal programs, or on private lands (Barko 1997). Although prairie dog control continued via other toxicants (zinc phosphide), it was at a reduced rate and with less effective poisons that required pre-baiting.

The last large-scale chemical control effort for black-tailed prairie dogs occurred on the Pine Ridge/Oglala Sioux Reservation in South Dakota in the 1980s. This effort resulted in the eradication of most prairie dogs on approximately 458,618 acres of occupied habitat from 1980 to 1984. From 1985 to 1986, 240,000 acres were re-treated (Roemer and Forrest 1996). Estimates of occupied habitat have increased at Pine Ridge/Oglala Sioux Reservation from approximately 20,000 to 30,000 acres in 1999 (Yellowhair, Pine Ridge Sioux Tribe, pers. comm. 1999) to approximately 89,000 to 100,000 acres in 2003 (South Dakota Department of Agriculture and SDDGFP 2004; Miller 2004). Following control efforts on Pine Ridge, three additional extensive control efforts targeted for the Cheyenne River Sioux and Rosebud Sioux Reservations in South Dakota and Fort Belknap Reservation in Montana were halted due to concerns regarding the lack of available black-footed ferret reintroduction sites.

The potential for future large-scale control efforts on Tribal lands may affect the black-tailed prairie dog in South Dakota. The BIA is currently considering some chemical control of rapidly expanding colonies on Tribal lands. Black-tailed prairie dog populations at several of these sites are the last remaining large complexes (greater than 10,000 acres) that have not experienced plague. The suggested intent of these proposed efforts would be to control some prairie dogs, particularly where they encroach on private lands, but allow core areas that are suitable for potential black-footed ferret reintroduction efforts to remain intact. This approach is more flexible and much less problematic than historic attempts to completely extirpate populations. As noted earlier, the most recent estimate of occupied habitat for South Dakota for 2003 was 407,000 acres with approximately 215,000 acres occurring on tribal lands.

Recent chemical control efforts have often been less successful than historic efforts for a variety of reasons. Early chemical control efforts were well-funded, federally-directed efforts that utilized efficient toxicants. Many current control efforts are small-scale, privately funded and privately directed efforts. The result is localized effects without significant impacts on

population dynamics range-wide. Available chemicals also are less effective than early toxicants that are now banned.

It is difficult to obtain accurate information regarding the use of toxicants to control black-tailed prairie dogs. The Environmental Protection Agency, the Federal agency responsible for establishing labeling requirements on all pesticides, has been unable to provide any information regarding distribution or use. They have noted that distribution and sale of a proprietary pesticide is considered confidential trade information and cannot be disclosed except in unusual circumstances. They also note that their offices do not have information on the amount of bait sold or the acreage controlled. Applicators are required to keep records for 3 years; however, they are not required to submit these records to a central location (Roybal, U.S. Environmental Protection Agency, in litt. 2002). We received limited information regarding sales of toxicants from APHIS and from some State agencies. This information is provided below.

APHIS provides technical assistance and conducts operational work in several States within the historic range of the black-tailed prairie dog. While APHIS is only one avenue available to landowners seeking chemical control and provides only a partial picture of control activities, some perspective regarding general trends can be gained from their records. For example, sales of zinc phosphide oats in Colorado, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, Texas, and Wyoming totaled 4,545 pounds in 1998, 7,595 pounds in 1999, 8,040 pounds in 2000, 7,105 pounds in 2001, and 13,080 pounds in 2002 (Green, APHIS, in litt. 2002). APHIS has no operational programs in Kansas or South Dakota.

Statewide estimates of toxicant sales are available for Nebraska, South Dakota, and Wyoming. The South Dakota Department of Agriculture sold approximately 27,000 pounds of zinc phosphide oat bait to South Dakota and Nebraska in 2000, 43,000 pounds in 2001, 98,000 pounds in 2002, and 135,000 pounds in 2003 (Fridley, South Dakota Department of Agriculture, in litt. 2004). At least 16,189 pounds of zinc phosphide bait was purchased from South Dakota and applied in Nebraska in 2002 (Hobbs, APHIS, pers. comm. 2003). In addition to legal control, numerous anecdotal reports have been received regarding illegal control activities; however, no data are available to evaluate the scope of these activities (Fritz, NGPC, in litt. 2002). In Wyoming, sales of toxicants were reported as “greatly increased between 2000 and 2001, especially in counties such as Campbell, Weston, and Niobrara.” Statewide sales of zinc phosphide increased from 8,031 pounds to 63,007 pounds. Aluminum phosphide fumotoxin sales increased from 126 flasks to 713 flasks over the same period. Sales trends for 2002 also appeared to be on the increase for most counties (Wichers, WGFD, in litt. 2002).

Little information regarding the extent of chemical control is available for other States. In Texas, it was reported that in 2002, 20,500 aluminum phosphide tablets and 650 pounds of zinc phosphide oat bait were used by APHIS to treat an estimated 2,463 acres (Leland, APHIS, in litt. 2002). APHIS was not the only source of toxicants in Texas (Young, TPWD, in litt. 2002). Green (APHIS, in litt. 2002) reported that in 2002, APHIS sold 280 pounds of zinc phosphide in North Dakota, 730 pounds in New Mexico, and 1,300 pounds in Montana. APHIS was not the only source of zinc phosphide in these States. In Oklahoma, the ODWC has issued permits to control approximately 70 acres (Duffy, ODWC, in litt. 2003). Rosmarino (Forest Guardians et al. in litt. 2003a) reported on numbers of prairie dogs poisoned in urban areas along the Front

Range of Colorado in 2001 and 2002. If a density of 10 prairie dogs per acre is assumed for this report and a number of 500 individuals is assumed where a quantity of “hundreds” is given, approximately 1,400 acres were poisoned in 2001 and 2,200 acres in 2002. Both of these estimates equate to less than 0.5 percent of the Statewide population of the species in Colorado at that time.

When grain zinc phosphide bait is applied according to directions, it can result in an 80 to 90 percent reduction in prairie dog numbers. The recommended application rate is 1/3 pound per acre (Hygnstrom et al. 1994). When applied properly, aluminum phosphide can provide greater than 90 percent control. Thus, some of the above numbers may indicate the potential for significant impacts to the species. For example, if all of the product were applied within the year of purchase at the recommended application rate, approximately 405,000 acres would have been treated in South Dakota and Nebraska in 2003. In Wyoming, approximately 189,000 acres would have been treated in Wyoming in 2001 if all of the oat bait were applied within the year of purchase at the recommended application rate. It is unclear to what extent consumers are effectively applying the toxicant they have available.

Furthermore, site-specific and range-wide data indicate the species’ resiliency to the impacts of chemical control. In the Pine Ridge/Oglala Sioux Reservation example discussed above, estimates occupied habitat increased from approximately 20,000 to 30,000 acres in 1999 to approximately 89,000 to 100,000 acres in 2003. Other site-specific examples of populations rebounding are discussed in the distribution, abundance, and trends section of this document. Recent range-wide data also show little evidence of permanent impacts from chemical control. It is possible that population densities may have been reduced on some lands due to chemical control. Additionally, black-tailed prairie dogs may have been extirpated from some specific sites. Although we acknowledge extant and potentially significant local effects on some populations, based on the new information above and recent State-by-State range-wide estimates of occupied habitat, we now conclude that impacts on the black-tailed prairie dog due to chemical control are not a threat to the extent that the species could become endangered in the foreseeable future.

We believe that synergistic effects likely impact the black-tailed prairie dog; however, we are unable to adequately describe and quantify these effects. Additionally, we are unaware of data from similar species in similar ecological circumstances that would infer that similar influences would cause the status of the black-tailed prairie dog to meet the ESA’s definition of a threatened species.

SUMMARY OF REASONS FOR ADDITION, REMOVAL, OR LISTING PRIORITY CHANGE:

An evaluation of new and previously-available scientific information has led us to conclude that the black-tailed prairie dog no longer meets the ESA’s definition of a threatened species. State agencies now estimate there are approximately 1,842,000 acres of occupied habitat across 10 western States, plus a small amount of habitat in Canada and Mexico. This estimate of occupied habitat is the best available indicator of the abundance of the species, and has played a substantial role in this decision.

Previously, we focused attention on a few large black-tailed prairie dog populations impacted by plague and extrapolated population losses at these sites across the species' entire range. Based on the updated distribution, abundance, and trends data, it now appears that these extrapolations were not correct. Dramatic fluctuations in the amount of black-tailed prairie dog occupied habitat at specific large complexes may occur due to plague epizootics or chemical control, but they do not appear to influence range-wide species persistence.

The magnitude and immediacy of the threat should be viewed pursuant to the definitions of the ESA. In order to be considered a threat, a factor should be shown to play a significant role in the population dynamics of the species such that it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of the range. None of the five listing factors as described in section 4(a) of the ESA and further described at 50 CFR 424.11 rise to this level of threat, thus the species does not meet the ESA's definition of a threatened species. As a result, we find that the species is not in danger of extinction in the foreseeable future and, therefore, the petitioned action is not warranted. Thus we also no longer consider the species to be a candidate for listing.

We will reconsider this determination in the event that new information indicates that the threats to the species are of a considerably greater magnitude or imminence than identified here.

FOR REMOVALS:

No Is the removal based on a Policy for Evaluation of Conservation Efforts When Making Listing Decisions (PECE) finding?

FOR RESUBMITTED PETITIONS:

- a. Is listing still warranted? **No**
- b. To date, has publication of a proposal to list been precluded by other higher priority listing actions?
- c. Is a proposal to list the species as threatened or endangered in preparation?
- d. If the answer to c. above is no, provide an explanation of why the action is still precluded.

LAND OWNERSHIP: Nationwide, approximately 70 percent of black-tailed prairie dog occupied habitat occurs on State or private land, 20 percent occurs on Tribal land, and 10 percent occurs on Federal land. Federal landowners include the USFS, FWS, NPS, BLM, U.S. Air Force, and U.S. Army.

PRELISTING: The Prairie Dog Conservation Team formed in 1999, with members representing all 11 States within the historic range of the species. A Memorandum of Understanding to implement a Conservation Assessment and Strategy was signed by 9 States in February 2000. The purpose of this multi-State plan is to provide standards that the 11 States will use to implement management of the species that remove enough threats to the species such that long-term conservation of the species is assured.

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LISTING PRIORITY

THREAT			
Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

Rationale for listing priority number:

Magnitude: Not applicable.

Immediacy: Not applicable.

The magnitude and immediacy of the threat should be viewed pursuant to the definitions of the ESA. In order to be considered a threat, a factor should be shown to play a significant role in the population dynamics of the species such that it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of the range. None of the five listing factors as described in section 4(a) of the ESA and further described at 50 CFR 424.11 rise to this level of threat, thus the species does not meet the ESA's definition of a threatened species.

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, removal of candidates, and listing priority changes.

Approve: /s/ John A. Blankenship 8/10/04
(Acting) Regional Director, Fish and Wildlife Service Date

Concur: /s/ Marshall P. Jones, Jr. 8/12/04
(Acting) Director, Fish and Wildlife Service Date

Do not concur: _____
Director, Fish and Wildlife Service Date

Director's Remarks _____

Date of annual review: _____

Conducted by: _____

Comments _____

